



#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:

Yang et al.

**Application No.:** 10/791,244

Confirmation No.: 3614

Filed:

March 2, 2004

For: REDUCED COMPLEXITY SLIDING

WINDOW BASED EQUALIZER

Group:

2681

Examiner:

Not Yet Known

Our File:

I-2-0455.1US

Date:

March 23, 2005

#### SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO-1449 form. Newly cited documents are indicated by an asterisk (\*). Copies of the newly cited documents are enclosed.

Pursuant to amended 37 C.F.R. § 1.98(a)(2)(i), copies of the cited U.S. patent documents have not been included.

In the spirit of 37 C.F.R. § 1.97(e)(2), the undersigned certifies that each newly cited item of information contained in this Supplemental Information Disclosure

Applicant: Yang et al.

**Application No.:** 10/791,244

Statement was cited in a communication from a counterpart U.S. application, and, to

the knowledge of the person signing the certification, after making reasonable inquiry,

no new item of information contained in the Supplemental Information Disclosure

Statement was known to any individual designated in § 1.56(c) more than three

months prior to the filing of this Supplemental Information Disclosure Statement.

It is respectfully requested that the Examiner consider these documents and

return an initialed copy of the PTO-1449 form indicating his consideration of the cited

materials.

Respectfully submitted,

Yang et al.

Jeffrey M. Glabicki

Registration No. 42,584

(215) 568-6400

Volpe and Koenig, P.C. United Plaza, Suite 1600 30 South 17th Street Philadelphia, PA 19103

JMG/drj

Enclosures (4)

MAR 25 MIS E

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO. I-2-0455.1US

SERIAL NO. 10/791,244

APPLICANT Yang et al.

FILING DATE March 2, 2004 GROUP Not Yet Known

#### **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE I APPROPRIATI
	5,412,620	05/1995	Cafarella et al.			
	5,487,069	01/1996	O'Sullivan et al.			
	5,559,757	09/1996	Catipovic et al.			
	5,577,066	11/1996	Schuchman et al.			
	5,612,978	03/1997	Blanchard et al.			
	5,796,814	08/1998	Brajal et al.			
	5,818,868	10/1998	Gaudenzi et al.			
	5,828,658	10/1998	Ottersten et al.			
	5,930,369	7/1999	Cox et al.			
	6,047,020	04/2000	Hottinen			
	6,097,753	08/2000	Ко			
	6,128,276	10/2000	Agee			
	6,137,848	10/2000	Chennakeshu et al.			
	6,141,393	10/2000	Thomas et al.			
	6,144,711	11/2000	Raleigh et al.			······································
	6,181,714B1	01/2001	Isaksson et al.			
	6,188,717 B1	02/2001	Kaiser et al.			<del>- ,</del>
	6,289,005 B1	09/2001	Katz			·
	6,321,066 B1	11/2001	Katz et al.			
	6,321,082 B1	11/2001	Katz			
	6,320,903 B1	11/2001	Isaksson et al.			
	6,359,926 B1	03/2002	Isaksson et al.			
	6,359,938 B1	03/2002	Keevill et al.			
	6,363,128 B1	03/2002	Isaksson et al.			
	6,366,554 B1	04/2002	Isaksson et al.			
	6,377,632 B1	04/2002	Paulraj et al.			

EXAMINER	DATE CONSIDERED

	FORM PTO-1449		ATTY. DOCKET NO. I-2-0455.1US		SERIAL N 10/791,2	
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			APPLICANT Yang et al			
	NFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE March 2, 2004		GROUI Not Yet Kr	
(U	lse several sheets if necessary	)				
		U.S. PATEN	T DOCUMENTS			
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IS
	6,392,595 B1	05/2002	Katz et al.			
	6,396,801	05/2002	Upton et al.			
	6,438,174 B1	08/2002	Isaksson et al.			····· ,
	6,445,342 B1	09/2002	Thomas et al.			
	6,456,649 B1	09/2002	Isaksson et al.			
	6,466,629 B1	10/2002	Isaksson et al.			
	6,473,449 B1	10/2002	Cafarella et al.			-
	6,473,453 B1	10/2002	Wilkinson			
	6,493,395 B1	12/2002	Isaksson et al.			
	6,505,053 B1	01/2003	Winters et al.			
	6,512,737 B1	01/2003	Agee			
	6,538,986 B2	03/2003	Isaksson et al.			
	6,553,012 B1	04/2003	Katz			
	6,611,855 B1	08/2003	Hellberg et al.			
	6,618,431 B1	09/2003	Lee			
	6,643,526 B1	11/2003	Katz			
	6,658,619 B1	12/2003	Chen			
	6,680,969 B1	01/2004	Molnar et al.			
	6,662,024 B2	12/2003	Walton et al.			
	6,671,334 B1	12/2003	Kuntz et al.			
	6,684,065 B2	01/2004	Bult et al.			
	6,693,953 B2	02/2004	Cox et al.			
	6,724,743 B1	04/2004	Pigeonnat			
	6,729,929 B1	05/2004	Sayers et al.			
	6,744,320 B2	06/2004	Nguyen et al.			×
	6,745,352 B2	06/2004	Cheng			
	EXAMINER	1	DATE C	ONSIDERE	D	

FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			ATTY. DOCKET NO. I-2-0455.1US		SERIAL N 10/791,2	
			APPLICANT Yang et al.			
	INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE March 2, 2004		GROUI Not Yet Kr	
	(Use several sheets if necessary					
		U.S. PATENT	DOCUMENTS			
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,757,321 B2	09/2004	Pan et al.			
	6,760,388 B2	07/2004	Ketchum et al.			
	2001/0055319 A1	12/2001	Quigley et al.			
	2001/0049295 a1	12/2001	Matsuoka et al.			
	2001/0033614 A1	10/2001	Hudson			
	2002/0034191 A1	3/2002	Shattil			
	2002/0097784 A1	07/2002	Brunel et al.			
	2002/0118765 A1	08/2002	Nangia et al.			
	2002/0119803 A1	08/2002	Bitterlich et al.			
	2002/0122465 A1	09/2002	Agee et al.			
	2002/0122406 A1	09/2002	Chillariga et al.			
	2002/0126741 A1	09/2002	Baum et al.			
	2002/0126768 A1	09/2002	Isaksson et al.			
	2002/0159415 A1	10/2002	Pan et al.			
	2002/0159506 A1	10/2002	Alamouti et al.			
	2002/0159537 A1	10/2002	Crilly, Jr.			
	2002/0186715 A1	12/2002	Mestdagh			
	2003/0003880 A1	01/2003	Ling et al.			
	2003/0004697 A1	01/2003	Ferris			
	2003/0008684 A1	01/2003	Ferris			
	2003/0021237 A1	01/2003	Min et al.			
	2003/0021365 A1	01/2003	Min et al.			
	2003/0022651 A1	01/2003	Bannasch et al.	1		
	2003/0022680 A1	01/2003	Shreve			
	2003/0026201 A1	02/2003	Amesen			
	2003/0035392 A1	02/2003	Pan et al.			
	EXAMINER		DATE C	ONSIDERE	D	

FORM PTO-1449			ATTY. DOCKET NO. SERIAL NO. 1-2-0455.1US 10/791,244			
	S. DEPARTMENT OF COMMER TENT AND TRADEMARK OFFI	CE		PLICANT ng et al.		
	INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE March 2, 2004		GROUI Not Yet Kn	
(	Use several sheets if necessary	)				
		U.S. PATENT	DOCUMENTS			
XAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE I
	2003/0035491 A1	02/2003	Walton et al.			
	2003/0043732 A1	03/2003	Walton et al.			<del></del>
	2003/0043767 A1	03/2003	Pan et al.	1		<del></del>
	2003/0043887 A1	03/2003	Hudson	<u> </u>		
	2003/0043925 A1	03/2003	Stopler et al.	1		
	2003/0048856 A1	03/2003	Ketchum et al.			<del></del>
	2003/0058952 A1	03/2003	Webster et al.			
	2003/0063557 A1	04/2003	Mottier			
	2003/0072291 A1	04/2003	Brunel			
	2003/0076908 A1	04/2003	Huang et al.			
	2003/0076900 A1	04/2003	Magee et al.			
	2003/0081781 A1	05/2003	Jensen et al.			
	2003/0086366 A1	05/2003	Branlund et al.			
	2003/0099216 A1	05/2003	Nilsson et al.			-
	2003/0103584 A1	06/2003	Bjerke et al.			
	2003/0108117 A1	06/2003	Ketchum et al.			
	2003/0112880 A1	06/2003	Walton et al.			
	2003/0123384 A1	07/2003	Agee			
	2003/0125040 A1	07/2003	Walton et al.			
	2003/0128658 A1	07/2003	Walton et al.			
	2003/0129984 A1	07/2003	Dent			
	2003/0133403 A1	07/2003	Castelain et al.			
	2003/0147655 A1	08/2003	Shattil			
	2003/015021 A1	08/2003	Wang et al.			
	2003/0165131 A!	09/2003	Liang et al.			
	2003/0185310 A1	10/2003	Ketchum et al.			

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

	LICANT g et al.  CLASS	SERIAL N 10/791,2 GROUI Not Yet Kn	P
FILING DATE March 2, 2004  IMENTS  NAME  Mottier  Mennenga et al.  Yamaguchi  Ketchum et al.  Knobel et al.	g et al.	Not Yet Kn	NOWN
March 2, 2004  IMENTS  NAME  Mottier  Mennenga et al.  Yamaguchi  Ketchum et al.  Knobel et al.		Not Yet Kn	NOWN
MENTS  NAME  Mottier  Mennenga et al.  Yamaguchi  Ketchum et al.  Knobel et al.		Not Yet Kn	NOWN
Mottier  Mennenga et al.  Yamaguchi  Ketchum et al.  Knobel et al.	CLASS	SUBCLASS	
Mottier  Mennenga et al.  Yamaguchi  Ketchum et al.  Knobel et al.	CLASS	SUBCLASS	
Mottier  Mennenga et al.  Yamaguchi  Ketchum et al.  Knobel et al.	CLASS	SUBCLASS	
Mennenga et al. Yamaguchi Ketchum et al. Knobel et al.			
Yamaguchi Ketchum et al. Knobel et al.			
Ketchum et al. Knobel et al.			
Knobel et al.			
	1		_
Shor et al			
onor et al.			
Hwang et al.			
Shattil			
Upton et al.			
Sugar et al.			
Agee et al.			
Shattil			
Yang et al.			
Lee et al.			
Petre et al.			
Roberts			
Roberts			
Shattil			
Roberts			
Li et al.			
Raleigh			
Liew			
Liu et al.			
Papasakellarious			
DATE CO	NSIDERFI		
	Shattil Upton et al. Sugar et al. Agee et al. Shattil Yang et al. Lee et al. Petre et al. Roberts Roberts Shattil Roberts Li et al. Raleigh Liew Liu et al. Papasakellarious	Shattil Upton et al. Sugar et al. Agee et al. Shattil Yang et al. Lee et al. Petre et al. Roberts Roberts Shattil Roberts Li et al. Raleigh Liew Liu et al.	Shattil Upton et al. Sugar et al. Agee et al. Shattil Yang et al. Lee et al. Petre et al. Roberts Roberts Shattil Roberts Li et al. Raleigh Liew Liu et al.

	ORM PTO-1449		ATTY. DOCKET NO. SERIAL NO. 1-2-0455.1US 10/791,244				
	RTMENT OF COMMER ND TRADEMARK OFFI			PLICANT ang et al.			
STATEM	IATION DISCLOSURE MENT BY APPLICANT		FILING DATE March 2, 2004		GROU Not Yet Kr		
(Use seve	eral sheets if necessary						
<u> </u>		FOREIGN PATE	NT DOCUMENTS		1		
	DOCUMENT NUMBER	DATE	COUNTRY	0.400	5.155.155		SLATIC
	95/22859	08/1995	WO	CLASS	SUBCLASS	YES	NO
	95/27349	10/1995	WO				-
	96/22638	07/1996	WO				
	0 766 468 A2	04/1997	EP	-			
	97/34421	09/1997	WO				
	97/35384	09/1997	WO				
	97/48192	12/1997	WO				>
-	98/09395	03/1998	WO				
	98/10545	03/1998	WO				
	98/10549	03/1998	WO				
	98/10550	03/1998	WO				
	98/10552	03/1998	WO				
	98/10553	03/1998	WO				
	98/10554	03/1998	WO				
	98/10555	03/1998	WO				
	98/18272	04/1998	WO				
	98/36596	08/1998	WO				
	98/36598	08/1998	WO				
	98/36599	08/1998	WO				
	98/37638	08/1998	WO				
	99/49602	09/1999	WO				

EXAMINER	DATE CONSIDERED

FORM PTO-1449		ATTY. DOCKET NO.		SERIAL I		
U.S. DEPARTMENT OF COMMERC	I-2-0455.1US 10/791,244					
PATENT AND TRADEMARK OFFICE	APPLICANT Yang et al.					
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE March 2, 2004		GROU! Not Yet Kr		
(Use several sheets if necessary)		·				
FC	DREIGN PATE	ENT DOCUMENTS	<u> </u>			
					TRANS	SLATION
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO
99/62280	12/1999	WO			- "	
00/11823	03/2000	WO				
1 017 183 A2	07/2000	EP				
00/52872	09/2000	WO				
1 047 209 A1	10/2000	EP				
1 063 780 A2	12/2000	EP				-
01/10065 A1	02/2001	WO				
01/33761 A1	05/2001	WO				
01/33791 A1	05/2001	WO	<del> </del>			
01/47202 A2	06/2001	WO				
01/47203 A2	06/2001	WO				X
1 119 146 A2	07/2001	EP				
01/53932 A2	07/2001	WO				
01/54300 A2	07/2001	WO			_	-
01/54305 A1	07/2001	WO				
1 139 632 A1	10/2001	EP				
1 175 022 A2	01/2002	EP				<del>-</del> ·
02/29977 A2	04/2002	WO				
02/054601 A1	07/2002	WO			_	
02/054537 A1	07/2001	WO				
02/061962 A1	08/2002	WO			$\dashv$	
02/067527 A2	08/2002	WO				
02/073937 A2	09/2002	WO				
02/080483 A1	10/2002	WO			$\dashv$	
WO/082683 A2	10/2002	WO				
EXAMINER		DATE CO	NSIDERE	D		

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	ATTY. DOCKET NO. 1-2-0455.1US		SERIAL I 10/791,2			
U.S. DEPARTMENT OF COMMERC PATENT AND TRADEMARK OFFICE	APPLICANT Yang et al.					
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE March 2, 2004		GROU! Not Yet Kr		
(Use several sheets if necessary)						
FC	DREIGN PATE	ENT DOCUMENTS				
					TRAN	SLATION
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO
02/082683 A2	10/2002	WO				
1 255 387 A1	11/2002	EP				
02/093779 A2	11/2002	WO				
02/093784 A1	11/2002	WO				
02/093819 A1	11/2002	WO	**************************************			
03/005291 A1	01/2003	WO				
03/010898 A1	02/2003	WO				
03/015292 A2	02/2003	WO				
1 289 182 A2	03/2003	EP				
03/026237 A2	03/2003	WO				
03/028270 A1	04/2003	WO				
1 300 999 A1	04/2003	EP				
1 303 094 A2	04/2003	EP	`			
03/044983 A2	05/2003	WO				
03/081823 A1	10/2003	WO				
03/084092 A2	10/2003	WO				
1 357 693 A1	10/2003	EP				
03/092212 A1	11/2003	WO				
1 365 554 A1	11/2003	EP				
2004/002047 A1	12/2003	WO				
1 379 020 A1	01/2004	EP				
2004/003743 A1	01/2004	WO			-	
2004/008704 A1	01/2004	WO				
2004/023704 A2	03/2004	WO				
2004/023704 A2	03/2004	WO				
EVAMINED		DATE CO	NSIDEDE	.U		
EXAMINER		DAILOO	NOIDENE	ט.		

						11001	01 10
FORM PTO-1449			ATTY. DOCKET NO. SERIAL NO. 1-2-0455.1US 10/791,244				
	.S. DEPARTMENT OF COMMERC	APPLICANT					
'	ATENT AND TRADEMARK OFFIC	Æ		reican i ng et al.			
	INFORMATION DISCLOSURE		FILING DATE	Ť	CDOLL		
	STATEMENT BY APPLICANT		March 2, 2004	1	GROU! Not Yet Kr		
	(Use several sheets if necessary)		·				
	F	OREIGN PATE	ENT DOCUMENTS				
						TRAN	SLATION
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO
	2004/032347 A1	04/2004	WO				
	1 411 693 A3	04/2004	EP				
	2004/036345 A2	04/2004	WO				
	2004/038984 A2	05/2004	WO				
	2004/059935 A1	07/2004	WO				
	2004/064298 A2	07/2004	WO				
							Х
				<u> </u>			
				1			

EXAMINER	DATE CONSIDERED		

	FORM PTO-1449	ATTY. DOCKET NO. I-2-0455.1US	SERIAL NO. 10/791,244	
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		APPLICANT Yang et al.		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE GROUP March 2, 2004 Not Yet Known		
(U	se several sheets if necessary)			
	OTHER DOCUMENTS (Including A	uthor, Title, Date, Pertinent Pages	s, Etc.)	
	"Fast Algorithm for Solving Toeplitz May	Systems of Equations*, IBM Tech 1980, US, Vol. 22 No. 12.	nnical Disclosure Bulletin,	

EXAMINER	DATE CONSIDERED

IFW

MAR 25 2015

<b>y</b>			PTO/SB/21 (09-0 Approved for use through 07/31/2006.
TRANSMITTAL FORM  (to be used for all correspondence after initial fi	Application Number  Filing Date  First Named Inventor  Art Unit  Examiner Name	10/791 March Yang 6	Trademark Office; U.S. DEPARTMENT OF COMMERCONSTRUCTION OF COMMERC
Total Number of Pages in This Submission	Attorney Docket Number	1-2-045	55.1US
	ENCLOSURES (Check al	ll that appl	ly)
Fee Transmittal Form  Fee Attached  Amendment/Reply  After Final  Affidavits/declaration(s)  Extension of Time Request  Express Abandonment Request  Supplemental Information Disclosure Statement  Certified Copy of Priority Document(s)  Reply to Missing Parts/ Incomplete Application  Reply to Missing Parts under 37 CFR 1.52 or 1.53	Drawing(s)  Licensing-related Papers  Petition Petition to Convert to a Provisional Application Power of Attorney, Revocation Change of Correspondence Terminal Disclaimer Request for Refund CD, Number of CD(s)  Landscape Table on C  Remarks	Address	After Allowance Communication to To Appeal Communication to Board of Appeals and Interferences  Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  Proprietary Information  Status Letter Other Enclosure(s) (please Identify below): Form PTO-1449 International Search Report dated January 12, 2005, and International Search Report dated February 24, 2005 One (1) reference.
SIGNAT irm Name	URE OF APPLICANT, ATTO	RNEY, (	OR AGENT
rinted name  VOLPE AND KOENIC  Frinted name  Jeffrey M. Glabicki  March 23, 2005	М. 1	Reg. No.	42,584
	RTIFICATE OF TRANSMISS		
gnature	acsumine transmitted to the USPTO or de ed to: Mail Stop Amendment, Commission	posited with oner for Pate	n the United States Postal Service with sufficient ents, P.O. Box 1450, Alexandria, VA 22313-1450 on
yped or printed name   Inffroy M. Glat	<i>SfMMC</i> '		Date L

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

# This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

### **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

BLACK BORDERS

IMAGE CUT OFF AT TOP, BOTTOM OR SIDES

FADED TEXT OR DRAWING

BLURRED OR ILLEGIBLE TEXT OR DRAWING

SKEWED/SLANTED IMAGES

COLOR OR BLACK AND WHITE PHOTOGRAPHS

GRAY SCALE DOCUMENTS

LINES OR MARKS ON ORIGINAL DOCUMENT

REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY

## IMAGES ARE BEST AVAILABLE COPY.

☐ OTHER:

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.